

coordinating its power flux density levels with adjacent licensed or permitted operators, only if there is no licensed 17/24 GHz BSS space station or prior-filed application at a location less than four degrees from the offset orbital location at which the applicant proposes to operate.

(c)(1) Notwithstanding the provisions of this section, licensees and permittees will be allowed to apply for a license or authorization for a replacement satellite that will be operated at the same power level and interference protection as the satellite to be replaced.

(2) In addition, applicants for licenses or authority for a satellite to be operated at an orbit location that was made available after a previous 17/24 GHz BSS license was cancelled or surrendered will be permitted to apply for authority to operate a satellite at the same power level and interference protection as the previous licensee at that orbit location, to the extent that their proposed operations are consistent with the provisions of this part. Such applications will be considered pursuant to the first-come, first-served procedures set forth in § 25.158 of this part.

(d) Any U.S. licensee or permittee using a 17/24 GHz BSS space station that is located less than four degrees away from a prior-authorized 17/24 GHz BSS space station that is authorized to operate in accordance with paragraph (b) of this section:

(1) may not cause any more interference to the adjacent satellite network than would be caused if the adjacent 17/24 GHz BSS space station were located four degrees away from the proposed space station; and

(2) must accept any increased interference that results from the adjacent space station network operating at the offset orbital location less than four degrees away.

(e) Any 17/24 GHz BSS U.S. licensee or permittee that is required to provide information in its application pursuant to §§ 25.140(b)(4)(ii) or (b)(4)(iii) of this part must accept any increased interference that may result from adjacent 17/24 GHz BSS space stations that are operating in compliance with the rules for this service.

(f) Any 17/24 GHz BSS U.S. licensee or permittee that does not comply with the power flux-density limits set forth in § 25.208(w) of this part shall bear the burden of coordinating with any future co-frequency licensees and permittees of a 17/24 GHz BSS network under the following circumstances:

(1) If the operator's space-to-Earth power flux-density levels exceed the power flux-density limits set forth in § 25.208(w) of this part by 3 dB or less, the operator shall bear the burden of coordinating with any future operators proposing a 17/24 GHz BSS space station in compliance with power flux-density limits set forth in § 25.208(w) of this part and located within  $\pm 6$  degrees of the operator's 17/24 GHz BSS space station.

(2) If the operator's space-to-Earth power flux-density levels exceed the power flux-density limits set forth in § 25.208(w) of this part by more than 3 dB, the operator shall bear the burden of coordinating with any future operators proposing a 17/24 GHz BSS space station in compliance with power flux-density limits set forth in § 25.208(w) of this part and located within  $\pm 10$  degrees of the operator's 17/24 GHz BSS space station.

(3) If no good faith agreement can be reached, the operator of the 17/24 GHz BSS satellite network that does not comply with § 25.208(w) of this part shall reduce its space-to-Earth power flux-density levels to be compliant with those specified in § 25.208(w) of this part.

[72 FR 60280, Oct. 24, 2007]

**§ 25.263 Information sharing requirements for SDARS terrestrial repeater operators.**

This section requires SDARS licensees in the 2320–2345 MHz band to share information regarding the location and operation of terrestrial repeaters with WCS licensees in the 2305–2320 MHz and 2345–2360 MHz bands. Section 27.72 of this chapter requires WCS licensees to share information regarding the location and operation of base stations in the 2305–2320 MHz and 2345–2360 MHz bands with SDARS licensees in the 2320–2345 MHz band.

(a) SDARS licensees must select terrestrial repeater sites and frequencies,

to the extent practicable, to minimize the possibility of harmful interference to WCS base station operations in the 2305–2320 MHz and 2345–2360 MHz bands.

(b) *Notice requirements.* SDARS licensees that intend to operate a new terrestrial repeater must, before commencing such operation, provide 10 business days prior notice to all potentially affected WCS licensees. SDARS licensees that intend to modify an existing repeater must, before commencing such modified operation, provide 5 business days prior notice to all potentially affected WCS licensees.

(1) For purposes of this section, a “potentially affected WCS licensee” is a WCS licensee that:

(i) Is authorized to operate a base station in the 2305–2315 MHz or 2350–2360 MHz bands in the same Major Economic Area (MEA) as that in which the terrestrial repeater is to be located;

(ii) Is authorized to operate a base station in the 2315–2320 MHz or 2345–2350 MHz bands in the same Regional Economic Area Grouping (REAG) as that in which the terrestrial repeater is to be located.

(iii) In addition to the WCS licensees identified in paragraphs (b)(1)(i) and (ii) of this section, in cases in which the SDARS licensee plans to deploy or modify a terrestrial repeater within 5 kilometers of the boundary of an MEA or REAG in which the terrestrial repeater is to be located, a potentially affected WCS licensee is one that is authorized to operate a WCS base station in that neighboring MEA or REAG within 5 kilometers of the location of the terrestrial repeater.

(2) For the purposes of this section, a business day is defined by §1.4(e)(2) of this chapter.

(c) *Contents of notice.* (1) Notification must be written (*e.g.*, certified letter, fax, or e-mail) and include the licensee’s name, and the name, address, and telephone number of its coordination representative, unless the SDARS licensee and all potentially affected WCS licensees reach a mutual agreement to provide notification by some other means. WCS licensees and SDARS licensees may establish such a mutually agreeable alternative notification mechanism without prior Commission approval, provided that they comply

with all other requirements of this section.

(2) Regardless of the notification method, notification must specify relevant technical details, including, at a minimum:

(i) The coordinates of the proposed repeater to an accuracy of no less than  $\pm 1$  second latitude and longitude;

(ii) The proposed operating power(s), frequency band(s), and emission(s);

(iii) The antenna center height above ground and ground elevation above mean sea level, both to an accuracy of no less than  $\pm 1$  meter;

(iv) The antenna gain pattern(s) in the azimuth and elevation planes that include the peak of the main beam; and

(v) The antenna downtilt angle(s).

(3) An SDARS licensee operating terrestrial repeaters must maintain an accurate and up-to-date inventory of its terrestrial repeaters operating above 2 watts average EIRP, including the information set forth in §25.263(c)(2), which shall be available upon request by the Commission.

(d) *Calculation of Notice Period.* Notice periods are calculated from the date of receipt by the licensee being notified. If notification is by mail, the date of receipt is evidenced by the return receipt on certified mail. If notification is by fax, the date of receipt is evidenced by the notifying party’s fax transmission confirmation log. If notification is by e-mail, the date of receipt is evidenced by a return e-mail receipt. If the SDARS licensee and all potentially affected WCS licensees reach a mutual agreement to provide notification by some other means, that agreement must specify the method for determining the beginning of the notice period.

(e) *Duty to cooperate.* SDARS licensees must cooperate in good faith in the selection and use of new repeater sites to reduce interference and make the most effective use of the authorized facilities. Licensees of stations suffering or causing harmful interference must cooperate in good faith and resolve such problems by mutually satisfactory arrangements. If the licensees are unable to do so, the International Bureau, in consultation with the Office of Engineering and Technology and the Wireless Telecommunications Bureau,

may impose restrictions on SDARS licensees, including specifying the transmitter power, antenna height, or area or hours of operation of the stations.

[75 FR 45069, Aug. 2, 2010]

**§ 25.264 Requirements to facilitate reverse-band operation in the 17.3–17.8 GHz band of 17/24 GHz Broadcasting-satellite Service and Direct Broadcast Satellite Service space stations.**

(a) Each applicant for a space station license in the 17/24 GHz broadcasting-satellite service (BSS) must provide a series of tables or graphs with its application, that contain the predicted transmitting antenna off-axis gain information for each transmitting antenna in the 17.3–17.8 GHz frequency band. Using a Cartesian coordinate system wherein the X axis is tangent to the geostationary orbital arc with the positive direction pointing east, *i.e.*, in the direction of travel of the satellite; the Y axis is parallel to a line passing through the geographic north and south poles of the Earth, with the positive direction pointing south; and the Z axis passes through the satellite and the center of the Earth, with the positive direction pointing toward the Earth, the applicant must provide the predicted transmitting antenna off-axis antenna gain information:

(1) In the X–Z plane, *i.e.*, the plane of the geostationary orbit, over a range of  $\pm 30$  degrees from the positive and negative X axes in increments of 5 degrees or less.

(2) In planes rotated from the X–Z plane about the Z axis, over a range of  $\pm 60$  degrees relative to the equatorial plane, in increments of 10 degrees or less.

(3) In both polarizations.

(4) At a minimum of three measurement frequencies determined with respect to the entire portion of the 17.3–17.8 GHz frequency band over which the space station is designed to transmit: 5 MHz above the lower edge of the band; at the band center frequency; and 5 MHz below the upper edge of the band.

(5) Over a greater angular measurement range, if necessary, to account for any planned spacecraft orientation bias or change in operating orientation relative to the reference coordinate

system. The applicant must also explain its reasons for doing so.

(b) Each applicant for a space station license in the 17/24 GHz BSS must provide power flux density (pfd) calculations with its application that are based upon the predicted off-axis transmitting antenna gain information submitted in accordance with paragraph (a) of this section, as follows:

(1) The pfd calculations must be provided at the location of all prior-filed U.S. DBS space stations where the applicant's pfd level exceeds the coordination trigger of  $-117$  dBW/m<sup>2</sup>/100 kHz in the 17.3–17.8 GHz band. In this rule, the term prior-filed U.S. DBS space station refers to any Direct Broadcast Satellite service space station application that was filed with the Commission (or authorization granted by the Commission) prior to the filing of the 17/24 GHz BSS application containing the predicted off-axis transmitting antenna gain information. The term prior-filed U.S. DBS space station does not include any applications (or authorizations) that have been denied, dismissed, or are otherwise no longer valid. Prior-filed U.S. DBS space stations may include foreign-licensed DBS space stations seeking authority to serve the United States market, but do not include foreign-licensed DBS space stations that have not filed applications with the Commission for market access in the United States.

(2) The pfd calculations must take into account the maximum permitted longitudinal station-keeping tolerance, orbital inclination and orbital eccentricity of both the 17/24 GHz BSS and DBS space stations, and must:

(i) Identify each prior-filed U.S. DBS space station at whose location the coordination threshold pfd level of  $-117$  dBW/m<sup>2</sup>/100 kHz is exceeded; and

(ii) Demonstrate the extent to which the applicant's transmissions in the 17.3–17.8 GHz band exceed the threshold pfd level of  $-117$  dBW/m<sup>2</sup>/100 kHz at those prior-filed U.S. DBS space station locations.

(3) If the calculated pfd level is in excess of the threshold level of  $-117$  dBW/m<sup>2</sup>/100 kHz at the location of any prior-filed U.S. DBS space station, the applicant must also provide with its application certification that all affected